Comments on IDEM's First Notice of Rulemaking #08-764 (Antidegradation)
from Environmental Coalition

Nov. 13, 2008
Sent Via Certified Mail #7005 1160 0002 7241 1926

**OFFICIAL COMMENT**

**MaryAnn Stevens**
**Mail Code 65-40**
**Rules Section**
**Office of Water Quality**
**Indiana Department of Environmental Management**
**100 North Senate Avenue**
**Indianapolis, IN 46204-2251**
mstevens@idem.in.gov



Thomas Easterly
Commissioner, Office of the Commissioner
Indiana Department of Environmental Management
100 North Senate Avenue
Indianapolis, IN 46204-2251
teasterl@idem.in.gov

Bruno Pigott
Assistant Commissioner
Office of Water Quality
Indiana Department of Environmental Management
100 North Senate Avenue
Indianapolis, IN 46204-2251
bpigott@idem.in.gov

Martha Clark Mettler
Deputy Assistant Commissioner
Office of Water Quality
Indiana Department of Environmental Management
100 North Senate Avenue
Indianapolis, IN 46204-2251
mclark@idem.in.gov

Dear Ms. Stevens, Mr. Easterly, Mr. Pigott, and Ms. Mettler:

The Indiana Department of Environmental Management published a first notice of comment period on the development of new rules and amendments to rules concerning antidegradation standards and implementation procedures, LSA Document #08-764, in the Indiana Register on October 15, 2008. The environmental organizations listed below offer the following comments pursuant to this first notice.

These comments represent opinions and interests of the following organizations (in alphabetical order):

- The Alliance for the Great Lakes is a not-for-profit conservation organization that works to conserve and restore the Great Lakes resource through policy, education, and local efforts, to ensure a healthy Great Lakes and clean water for generations of people and wildlife.
- The Conservation Law Center is a not-for-profit public interest law firm located in Bloomington, Indiana, and operates the Conservation Law Clinic under an agreement with Indiana University School of Law.
- The Eastern Surfing Association is the largest amateur surfing association in the world, was founded as a non-profit organization in 1967 and has grown to more than 10,000 members from Maine to Florida and the Great Lakes to the Gulf coast."
- The Environmental Law & Policy Center is a not-for-profit public interest environmental legal advocacy and eco-business innovation organization. ELPC develops and leads successful strategic environmental advocacy campaigns to solve environmental problems and improve the quality of life in our Midwestern communities.
- The Hoosier Environmental Council is a not-for-profit environmental organization which aims to address Indiana's environmental challenges through education and advocacy. The HEC is guided by science, inspired by the ties between nature and humanity, and led to success through partnerships.
- The Natural Resources Defense Council is a not-for-profit environmental organization with 1.2 million members and online activists nationwide. NRDC seeks to safeguard the Earth: its people, its plants and animals, and the natural systems on which all life depends.
- Save the Dunes is a not-for-profit conservation organization that seeks to preserve, protect, and restore the Indiana Dunes and all natural resources in Northwest Indiana's Lake Michigan Watershed for an enhanced quality of life.
- The Sierra Club is an international not-for-profit membership organization, headquartered in San Francisco, California, with more than 1.3 million members and supporters. Sierra Club's mission includes practicing and promoting the responsible use of earth's ecosystems and resources, and protecting and restoring the quality of the natural and human environment. Sierra Club's Hoosier Chapter has more than 7,000 members.
- The Surfrider Foundation is a non-profit grassroots organization dedicated to the protection and enjoyment of our world's oceans, waves and beaches. Founded in 1984 by a handful of visionary surfers in Malibu, California, the Surfrider Foundation now maintains over 50,000 members and 80 chapters worldwide.

Members of these organizations or the organizations they represent live, work, and recreate near or on waters that are or will be affected by facilities that discharge pollutants into these waters under Clean Water Act permits issued by IDEM. These individuals will be directly affected by Indiana's development of new rules and amendments to rules concerning antidegradation standards and implementation procedures.

IDEM's first notice of comment period for antidegradation rulemaking solicits the following:

(1) The submission of alternative ways to achieve the purpose of the rule.

(2) The submission of suggestions for the development of draft rule language.

We begin our comments in Part I with the purpose of the antidegradation rule, then comment in Part II on the alternatives and issues identified as important to the rule, and close in Part III with suggestions for the development of draft rule language.

## I. The Purpose of the Antidegradation Rule

The basic purpose of a state antidegradation program, and the key principle of antidegradation policy, is to maintain and protect existing water quality, even where that water quality is better than applicable standards. The United States Environmental Protection Agency (EPA) Region VIII Guidance states this principle directly:

> Antidegradation recognizes that existing water quality has inherent value worthy of protection. Thus, unlike other aspects of water quality standards that are directed toward attainment of fully-protective levels of water quality (as defined by the applicable criteria), the purpose of antidegradation is to maintain and protect *existing* levels of water quality.[1]

Another way of stating this principle is with reference to the available assimilative (loading) capacity of a waterbody.[2] EPA, in interpreting the Clean Water Act, has stated that the assimilative capacity of a waterbody is "a valuable natural resource."[3]

Indiana's antidegradation rule must comply with the policy of the United States as stated in the Code of Federal Regulations. In addition, Indiana's rule must comply with EPA's interpretations of antidegradation policy and implementation requirements, as expressed in various guidance documents. Indiana may provide additional protections where needed, however, and indeed has decided that some waterbodies, such as Lake Michigan, deserve special protections not afforded to other high quality waters. Finally, Indiana's antidegradation rule must be logical and comprehensible to the public and the regulated community, and afford the public an opportunity to participate in the choices that must be made to implement the antidegradation policy.

## II. Alternatives for Achieving the Purpose of the Antidegradation Rule

The following comments are structured to correspond to the "Alternatives To Be Considered Within the Rulemaking" sections set forth within the first notice.

---

[1] U.S. EPA Region VIII Guidance: Antidegradation Implementation (August 1993), page iii (emphasis added).
[2] Assimilative capacity can be defined as the amount of loading that can be allowed while protecting existing conditions and assuring that the new or increased loading does not cause or contribute to a violation of water quality standards.
[3] Ephraim King, Director Office of Science and Technology, U.S. EPA, in guidance letter to Water Management Division Directors dated August 10, 2005.

***Alternative 1. Scope of Rulemaking***

The rulemaking should apply to all surface waters of the State of Indiana. "Each State must develop, adopt, and retain a statewide antidegradation policy regarding water quality standards and establish procedures for its implementation through the water quality management process."[4]

***Alternatives 2 and 7. De Minimis Loadings, Cumulative Cap on Exempted Loadings, and Exemptions in General***

This section provides specific comments on three issues that are logically and conceptually linked: *de minimis* loadings and cumulative caps for Tier 2 protected waters; *de minimis* loadings and cumulative caps for Indiana Tier 2.9 protected waters; and exemptions in general.

***De minimis* and Cumulative Cap for Tier 2**

The following comments apply to non-BCCs only, since EPA and the courts have stated that BCCs cannot be subject to a *de minimis* exemption.[5]

A *de minimis* loading of a pollutant is a quantity of pollutant that is too small to worry about because it will not cause a significant decrease in water quality. EPA and courts have accepted the application of a reasonably small *de minimis* for waters subject to Tier 2 protection, if properly implemented.[6] Pollutant loadings below *de minimis* levels are exempted from the antidegradation demonstration normally required under Tier 2 antidegradation policy.

A *de minimis* must be coupled with a ceiling (*i.e.*, cap) on the cumulative loadings into a waterbody that are allowed under the *de minimis* exemption. Without a cumulative cap, the risk of using up the entire assimilative capacity without any showing of necessity or importance is uncontrolled.[7]

Importantly, the cumulative cap should be a ceiling on all pollutant loadings that are exempted from the antidegradation demonstration based on the justification that they are *de minimis*. The recent Sixth Circuit opinion in *Kentucky Waterways Alliance v. Johnson* supports this claim that all exemptions justified as *de minimis* are relevant to the cumulative cap. Specifically, all of the judges in *Kentucky Waterways Alliance* concluded that the legally operative question with

---

[4] U.S. EPA Water Quality Standards Handbook, Second Edition (August 1994), page 4-2.

[5] In its March 1995 Great Lakes SID, EPA stated: "EPA does not agree that even small increases in the loadings of BCCs to the Great Lakes Basin can be considered de minimis. Low levels of BCCs in the Great Lakes have adverse impacts on the organisms that inhabit them. Further, because BCCs are both resistant to degradation and hydrophobic, they tend to accumulate in sediments and biota, amplifying their effects. For these reasons, even small increases in loadings of this type of pollutant must be considered significant." See also *Ohio Valley Envtl. Coalition v. Horinko*, 279 F. Supp. 2d 732 (S.D.W.V. 2003) (concluding that any individual de minimis for BCCs in Tier 2 waters within the Great Lakes Basin would be contrary to federal requirements).

[6] We note that some states do not apply a *de minimis* in their antidegradation rules.

[7] See *Ohio Valley*, 279 F. Supp. 2d 732 (S.D.W.V. 2003).

respect to the exemption of five categories of discharges in Kentucky's antidegradation rule is the following: "will the extent to which various emitters avail themselves of the exemptions result in significant, rather than *de minimis*, degradation?"[8] The court remanded the matter to EPA because the agency had not addressed "whether Kentucky's Tier-II-review exemptions *together* permit significant degradation."[9] One judge in the case, writing separately, indicated that no more than 10% of a waterbody's assimilative capacity should be used cumulatively by all "exempt" pollutant loadings justified by non-significance.[10]

Courts are rightly concerned that a significant amount of a waterbody's assimilative capacity could be used up by exempt increases in pollutant loadings without any demonstration that such increases are necessary and important, which is required by federal and State antidegradation policy for significant decreases in water quality.[11] In light of this concern, a stringent cumulative cap allowing no more than 10% of assimilative capacity to be used by all "exempt" loadings is quite reasonable.

Current proposals by industry that would allow 90% of a waterbody's assimilative capacity to be used by exempt loadings would mean that the assimilative capacity could be used up almost entirely without *any* antidegradation demonstration of necessity and importance. In fact, the justification for most exempt pollutant loadings is that they, alone or in combination, will not result in a "significant" decrease in water quality. No logic could construe the depletion of 90% of a waterbody's assimilative capacity—a "valuable natural resource"[12]—as an "insignificant" decrease in water quality. Moreover, such a proposal could theoretically leave only 10% of a waterbody's assimilative capacity for proposed loadings that *do* undergo and pass an antidegradation demonstration and which could be quite important socially and economically.

EPA and the courts have already stated that each individual loading of pollutants exempted as *de minimis* must not use more than 10% of the assimilative capacity of the waterbody. If we are correct that courts will strike down a cumulative cap that allows much more than 10% of the total assimilative capacity of a waterbody to be used by loadings "exempt" from antidegradation review by virtue of their insignificance, then the amount of impact allowed for each individual *de minimis* loading is limited. Specifically, the percent of unused assimilative capacity allocated for each individual *de minimis* pollutant loading should be around the 5% range to allow for more than one "bite" from the unused capacity.

---

[8] 540 F.3d 466, 492 (6th Cir. 2008).

[9] *Id.* (emphasis added) ("The EPA measured Kentucky's §131.12 compliance by assessing whether each individual exemption resulted in 'significant' or 'insignificant' degradation, but that approach avoids assessing the exemptions' cumulative effects on the State's antidegradation compliance. Because §131.12 regulates degradation, not individual sources of degradation . . . the legally relevant inquiry is whether Kentucky's Tier-II-review exemptions together permit significant degradation, see *Ohio Valley*, 279 F.Supp.2d at 770 n. 3 ('From the perspective of water quality ... it does not matter whether the number of discharges is one or one hundred; the relevant question is how much water quality is lowered by any and all discharges into a water body'). The EPA's decision document avoids answering this question, and we accordingly lack the information needed to meaningfully review the EPA's decision to approve Kentucky's regulations.").

[10] 540 F.3d at 486-88 (6th Cir. 2008).

[11] 40 C.F.R. §131.12; 327 IAC 2-1.5-4.

[12] Ephraim King, Director Office of Science and Technology, U.S. EPA, in guidance letter to Water Management Division Directors dated August 10, 2005.

For high quality streams (but not Lake Michigan), alternatives to calculating unused assimilative capacity for each proposed discharge may be acceptable, as long as these methods respect a cumulative cap allowing no more than 10% of the total assimilative capacity to be used up by exempt loadings. For example, IDEM may allow as *de minimis* those discharges into streams that meet water quality standards at the end of the pipe (*e.g.*, WQBEL with no dilution) whenever there is greater than 20:1 dilution. Where dilution is less than 20:1, however, discharges that meet water quality standards at the end of the pipe will likely use more than 5% of unused assimilative capacity. For these lower-flow situations, simply requiring an antidegradation review would be easier to apply than a 5% unused assimilative capacity rule. This alternative would require an antidegradation demonstration in very few situations in which a *de minimis* exemption is proper.

**_De minimis_ for Tier 2.9 (OSRWs and EUWs) including Lake Michigan**

For Tier 2.9 protected waters (OSRWs and EUWs), Ind. Code §13-18-3-2(m) requires that Indiana's antidegradation rule provide for a "*de minimis* quantity of additional pollutant load." The designation of Tier 2.9 refers to the extra level of antidegradation protection for these waters that is between Tier 2 and Tier 3 protection. Tier 2.9 is not required by, or referenced in, the federal water quality standards regulation, and the degree of extra protection intended by the Indiana legislature in Ind. Code §13-18-3-2 is unclear.

Section 13-18-3-2 prevents any new or increased discharge of a pollutant into an OSRW or EUW that would result in a significant lowering of water quality unless there is an associated overall improvement in the water quality of that waterbody. This requirement adds protection to OSRWs and EUWs not required for other high quality waters.

Ind. Code §13-18-3-2 does not address the relative or absolute size of the *de minimis* threshold required for OSRWs such as Lake Michigan. Reference background concentration is the most justifiable and practical *de minimis* threshold for Lake Michigan (and other high quality large lakes), for two reasons.

First, the concept of assimilative capacity is not readily applicable to a vast waterbody such as Lake Michigan. A *de minimis* test for discharges into Lake Michigan based on 10%, 5%, or even 1% of unused assimilative capacity would still be a relatively large loading. For perspective, consider that the increases in pollutant loading proposed for the BP Whiting Refinery would have been exempted from an antidegradation demonstration if the *de minimis* threshold had been even 1% of the unused assimilative capacity of Lake Michigan. Note that for Lake Michigan, the requirement that water quality standards be met at the end of the pipe is a basis for wasteload allocations under 327 IAC 5-2-11.4 and is not appropriate as a basis for a *de minimis* threshold.[13]

[13] The same holds for inland lakes and other waters of the Great Lakes system with no appreciable flow relative to their volume. 327 IAC 5-2-11.4(b).

Second, because of the OSRW status of Lake Michigan as well as its symbolic importance, the *de minimis* used for the Lake should be more stringent than the *de minimis* used for other high quality waters.

Reference water quality is a valid *de minimis* under Ind. Code §13-18-3-2, which requires that IDEM provide for a "*de minimis* amount of loading."[14] With such a *de minimis*, facilities would be able to increase pollutant loadings yet stay within the *de minimis* by adjusting the effluent flow of water to keep the pollutant concentration in the effluent below the reference value.

For OSRW and EUW streams, alternatives to calculating unused assimilative capacity for each proposed discharge may be acceptable, as long as these methods respect a cumulative cap allowing no more than 10% of total assimilative capacity to be used up by exempt loadings.

**Other Exempt Increases in Pollutant Loadings**

Two categories of discharges may be reasonably held "exempt" from a full antidegradation demonstration:

(1) discharges that can be presumed to produce no decrease in water quality or only a *de minimis* decrease in water quality relative to currently permitted levels (*e.g.*, new limits based on improved monitoring or test methods during the 5-year period of permit validity, normal operational variability within current permit limits, a simultaneous decrease of the same pollutant from another outfall of the same facility into the same waterbody, increased loading due solely to an increase of the pollutant in intake water, and a short term and limited loading and effect on water quality);

(2) discharges for which a formal regulatory procedure is in place that sufficiently substitutes for an antidegradation demonstration (*e.g.*, a CERCLA of RCRA action, and a bypass not prohibited by 327 IAC 5-2-8(11)).

Most exemptions will fall into the first category: discharges justified as nonsignificant.

In contrast, two other categories of discharges are *not* appropriately exempted from an antidegradation demonstration:

(1) discharges that produce a significant *net* decrease in the water quality in a particular waterbody, regardless of their effect on the "environment" generally (*e.g.*, a new or increased discharge necessary to accomplish reduction in air pollutant, and any other activities intended to result in a net benefit to the "environment" but not the waterbody);

(2) discharges that may have the potential to improve overall water quality in the waterbody but which will require an analysis of alternatives and impacts (*e.g.*, a simultaneous decrease of the same pollutant from another facility, pollutant trading, and a new or increased discharge from wastewater treatment plant to alleviate public health concern). Such discharges

[14] Ind. Code §13-18-3-2(m)(1).

cannot benefit from a presumption that they will produce only a *de minimis* lowering of water quality, and do not have substitutes for antidegradation demonstration in place.

A few specific examples of improper exemptions deserve further discussion.

Pollutant trading schemes—any proposal to mitigate an increased loading of a pollutant with a decrease in another pollutant—are improper bases of exemption from an antidegradation demonstration. EPA accepts the pollutant trading concept as a tool for maintaining or improving water quality, but only for some pollutants and some situations.[15] First, EPA does not support trading of bioaccumulative pollutants.[16] Second, application of the pollutant trading exemption to the watershed scale must be done with care.[17] For example, "some potential trades that could result in a general water quality improvement in a broad area may also result in acute or chronic localized impacts."[18] Third, pollutant trading must be preceded by a rigorous analysis of the trade:

> There should be an ability to establish water quality equivalence between the location where a pollutant reduction is made and the location where that reduction is purchased or used. This ensures that the water quality impact of trading will be equivalent to, or better than, the pollutant reductions that would have occurred without trading. In addition to ensuring that overall pollutant reduction impacts are equivalent, trades must not create locally high loadings of pollutants or "hotspots."[19]

Similarly, it would be inappropriate to use an exemption as an incentive for economic activity. For example, some interests have proposed that significant discharges associated with brownfield and other redevelopment projects be exempted from an antidegradation demonstration to avoid discouraging such activities with such a regulatory burden. This is a wholly inappropriate use of the exemption concept, and would violate federal antidegradation policy.

**Public Involvement in Exemption Decisions**

Federal law requires that the public have an opportunity to comment on the IDEM Commissioner's decision to approve or reject an antidegradation demonstration. EPA guidance states as follows:

---

[15] See U.S. EPA, Water Quality Trading Assessment Handbook (November 2004) EPA 841-B-04-001.
[16] U.S. EPA, Water Quality Trading Toolkit for Permit Writers, Office of Wastewater Management Water Permits Division, (August 2007) EPA 833-R-07-004, page 10 ("Not all pollutants are necessarily suitable for trading. . . . EPA's Trading Policy supports trading for TN, TP, and sediment and indicates that other pollutants may be considered for trading on a case-by-case basis. EPA does not support trading of persistent bioaccumulative toxics (PBTs).").
[17] U.S. EPA, Water Quality Trading Toolkit for Permit Writers, pages 12-13 ("In general, the geographic scope of a trade should be no larger than necessary to encompass the universe of sources that contribute to a specific water quality problem that is to be addressed through trading.").
[18] U.S. EPA, Water Quality Trading Assessment Handbook, chapter II, pages 16-17.
[19] *Id.*, chapter II, page 6.

> Antidegradation, as with other water quality standards activities, requires public participation and intergovernmental coordination to be an effective tool in the water quality management process. 40 C.F.R. §131.12(a)(2) contains explicit requirements for public participation and intergovernmental coordination when determining whether to allow lower water quality in high quality waters. . . . The antidegradation public participation requirement may be satisfied in several ways. The State may hold a public hearing or hearings. The State may also satisfy the requirement by providing public notice and the opportunity for the public to request a hearing.[20]

This decision on the antidegradation demonstration is an intermediate stage in the process of reviewing a discharger's application for a new or increased discharge. Note that although public notice and comment is also required for the draft NPDES permit, that opportunity does not substitute for advance public input at key intermediate stages during the antidegradation evaluation process.

Public input to the Commissioner's decision to exempt a discharge from an antidegradation demonstration may in some cases be just as important as public input into the antidegradation demonstration decision itself, for two reasons.

First, public review and scrutiny is an integral part of antidegradation policy. EPA guidance states: "the intent [of the public participation provisions in the federal antidegradation policy] is to ensure that no activity that will cause water quality to decline in existing high-quality waters is undertaken without adequate public review."[21] Where the *de minimis* nature of an activity is not clear cut, opportunity for public input into the decision whether or not to grant an exemption is vital to antidegradation policy.[22]

Second, if the rule does not require a formal analysis of alternatives before the IDEM Commissioner grants an exemption for an activity, public input is necessary to explore the range of alternatives. Alternatives to an exemption may obviate the need for the exemption and the subsequent decrease in water quality. Some of the exemptions that have been proposed in the past are controversial and technically complex, and their claimed *de minimis* nature is not clear. These exemptions especially would benefit from public comment and information on alternatives.

---

[20] U.S. EPA Water Quality Standards Handbook, Second Edition (August 1994), section 4.8.2., page 4-13.

[21] *Id.*, page 4-7.

[22] The current antidegradation implementation rule at 327 IAC 5-2-11.7(c) provides notice and comment for several exemptions: (1) short term, temporary discharges; (2) discharges due to CERCLA or RCRA actions; (3) discharges due to implantation of approved industrial or municipal controls on wet-weather flows; (4) discharges due to intake of pollutants; (5) discharges where there is a contemporaneous enforceable decrease in the actual loading of the pollutant from sources contributing to the OSRW or tributaries such that there is no net increase in the loading of the pollutant or pollutant parameter to the OSRW; (6) discharges necessary to accomplish a reduction in the discharge of another pollutant.

***Alternative 3. DTBELS Based on Federal Effluent Guidelines or Best Available Treatment***

IDEM's default technology-based effluent limitations (DTBELs) are based on applicable federal effluent guidelines or, for pollutants without such guidelines, IDEM's best professional judgment of the best cost-effective treatment technology that is readily available. IDEM intends to use DTBELs to allow antidegradation to be assessed for pollutants without water quality criteria.

IDEM's intent to assess antidegradation for all pollutants of concern, whether or not they have associated water quality criteria, is on the right track. We have three concerns with using DTBELs as triggers for antidegradation review or as *de minimis* levels of loading.

First, in many cases the federal effluent guidelines have not been updated for decades, do not reflect the best technology available, and were not intended to be used to trigger antidegradation review. Federal effluent guidelines cannot be guaranteed to result in only *de minimis* degradation of water quality, especially if used in critical or low-flow conditions. We recommend that any facility applying for a new or increased discharge should be able to do better than the federal effluent guideline, and doing so should not exempt the discharge from antidegradation review unless the discharge independently meets the *de minimis* test.

Second, while an effluent limit based on "the best cost-effective treatment technology that is readily available" may be appropriate to consider during antidegradation review, whether or not a treatment technology can be cost-effective for the facility to apply is not an appropriate trigger for antidegradation review. Such a consideration puts the cart before the horse. The recognized understanding of *de minimis* is that the proposed increase in discharge is too small to worry about having a negative impact on water quality. If the increase in discharge is large enough to worry about, then an antidegradation demonstration must be done, and such a demonstration is the appropriate context in which to consider such factors as the cost-effectiveness of treatment technologies. In fact, a new effluent limit will not even be appropriate if the increased discharge is not necessary to accommodate important social or economic development.

Finally, the DTBEL concept may not be appropriate in low flow streams where there is very little mixing. If DTBELs are to be used in these situations, IDEM should set the limits at sufficiently protective levels. Furthermore, we support an approach that defines a *de minimis* discharge for non-OSRWs as the more stringent of a limit based on a DTBEL or a limit based on 5% consumption of unused assimilative capacity per proposed new or increased discharge.

***Alternative 4. Social–Economic Justification / Necessary and Importance Demonstration***

The basis of the antidegradation demonstration is provided in 40 C.F.R. §131.12(a)(2), which states that no lowering of water quality in waters with Tier 2 protection is allowed unless allowing lower water quality is "necessary to accommodate important economic or social development in the area in which the waters are located."[23] We refer to this test as the

[23] 40 C.F.R. §131.12(a)(2).

"necessary and importance" test. Activities such as new discharges or expansion of existing facilities would presumably lower water quality and would not be permissible unless the State conducts a review consistent with the requirements of 40 C.F.R. §131.12(a)(2).[24]

EPA views the antidegradation demonstration as a stringent test, a test certainly not met by every applicant.

> This provision is intended to provide relief only in a few extraordinary circumstances where the economic and social need for the activity clearly outweighs the benefit of maintaining water quality above that required for 'fishable/swimmable' water, and both cannot be achieved. *The burden of demonstration on the individual proposing such activity will be very high.*[25]

Promotion of Tier 2 antidegradation policy requires two separate inquiries: (1) whether the proposed lowering of water quality is "necessary," and (2) whether the social or economic benefits of the project are "important."

First, the proposed discharge must be "necessary." Satisfying this inquiry demands an analysis of alternatives to the proposed discharge. The "necessary" analysis questions whether it is possible to minimize, mitigate, or avoid the proposed discharge or its impacts to water quality through technology or other means. EPA has stated that "[g]iven the variety of engineering approaches to pollution control and the emerging importance of pollution prevention, the finding of necessity is among the most important and useful aspects of an antidegradation program and potentially an extremely useful tool in the context of watershed planning."[26]

The applicant must provide information sufficient for IDEM to reach a reasoned determination. The burden is on the applicant to show that none of the possible alternatives identified are technologically feasible and that all feasible alternatives are cost prohibitive before IDEM can find that a particular discharge is "necessary." As IDEM stated in the BP Whiting permit fact sheet, antidegradation analysis requires that the applicant "demonstrate that all economically and technically feasible measures have been taken to avoid the action that will result in the new or increased discharge of the pollutant or pollutant parameter including a demonstration that it is not feasible to limit the new or increased discharge to a temporary or short term period."[27]

An alternatives analysis must consider non-discharge alternatives, pollution prevention and substitution alternatives, alternative locations for the activity or disposal, as well as alternative

---

[24] The full requirement under the Tier 2 antidegradation policy is that the State must properly find that the discharge is necessary to accommodate important economical or social development in the area in which the waters are located, must fully satisfy all intergovernmental coordination and public participation provisions, and must assure that the highest statutory and regulatory requirements for point sources and best management practices for nonpoint source pollutant controls are achieved.

[25] EPA Water Quality Standards Handbook, Second Edition (August 1994), page 4-7 (emphasis added).

[26] 63 Fed. Reg. 36742, 36784.

[27] IDEM's BP Products North America Inc. Whiting Refinery Fact Sheet for NPDES Permit (March 2007), page 15, *available at* www.in.gov/idem/files/bp_factsheet.doc.

treatment technologies.[28] The availability of end of pipe control technology should also be considered under this analysis. All available alternatives need to be identified prior to eliminating those that can be deemed technically or economically infeasible. A separate analysis should be performed for each pollutant or pollutant parameter for which there may be a significant lowering of water quality.[29]

In addition, the reasoning behind eliminating alternatives should be clearly documented so that IDEM and the public can be assured that any rejection of alternatives is reasonable. If it appears based on the record that an alternative may be reasonably available but the applicant does not to provide the information necessary for IDEM to determine whether it would be "feasible," IDEM should require the applicant to submit additional information or should deny the application.

Second, the activity that the applicant claims requires a new or increased discharge must accommodate important social or economic development in the area of the receiving waterbody. The demonstration of "importance" focuses on the socio-economic benefits of the proposed activity, such as job creation, social services and increased tax base, counterbalanced against the socioeconomic costs of the proposal, such as projected negative socio-economic effects on the community and the projected environmental effects. This balancing concept is key. Socioeconomic development cannot be said to be "important" if the potential economic and social benefits of the project are outweighed by the overall costs to society of allowing additional pollution to the water.[30] Accordingly, if the negative environmental, social, and economic impacts of the action outweigh the positive environmental, social, and economic impacts, then the antidegradation application must be denied.

Often the economic benefits of an activity, such as jobs creation, are more readily quantified than the economic and social costs of the activity. This imbalance in the ability to quantify costs versus benefits may skew the importance analysis since the human mind is often more impressed by quantitative information than qualitative information, regardless of its relative uncertainty. When numeric information is not available, IDEM should consider reasonable public expectations and narrative descriptions. For example, Washington State antidegradation guidance states:

> It is intended that the analysis focus on reasonable expectations and be generally based upon available information. The use of narrative descriptions is acceptable,

---

[28] For example, the following alternatives should be considered: improved operation and maintenance of an existing treatment system; recycling or reuse of wastewater; discharge to on-site system; seasonal or controlled discharges to avoid critical water quality periods; discharge to a sanitary sewer; and land application of wastewater. See Massachusetts and Oregon antidegradation implementation procedures.

[29] The Washington State antidegradation implementation procedures provide, for example, that "[t]he rejection of any alternative that would produce a significant improvement in the resulting discharge or water quality must be based on a solid determination that the costs are prohibitively expensive." Washington State Supplementary Guidance Implementing the Tier II Antidegradation Rules (July 18, 2005) WAC 173-201A-320, page 16, *available at* http://www.ecy.wa.gov/programs/wq/swqs/antideg-tier2-guidance.pdf.

[30] See U.S. EPA Region VIII Guidance: Antidegradation Implementation (August 1993), page 21 (stating that the inquiry should "weigh the applicant's demonstration against counterbalancing socioeconomic costs associated with the proposed activity, such as projected negative socio-economic effects on the community and the projected environmental effects").

> and should be encouraged, where numeric information is not readily available. For example, we may not know the lost economic benefits of using up most of the remaining assimilative capacity for a common water quality pollutant, but the relative change in capacity and the fact that newcomers will meet very stringent requirements is important social and economic information. Similarly, it may not be reasonable to put a value on the increased contamination of a popular fishing hole or swimming beach, but it is a social effect that is worthy of discussion and is further illuminated by including information on the estimated number and types of users.[31]

In creating a framework for the importance analysis, it is important to ensure that the positive and negative impacts of the activity are capable of unbiased comparison in a documented weighting scheme. This will likely require that both monetized and qualitative effects, as well as their relative uncertainties, are analyzed on both sides of the equation.

Past proposals for an antidegradation rule have suggested that agencies or organizations other than IDEM are qualified to make the decision pertaining to the economic or social importance of a proposed activity. Let us be clear: it would be bad policy to adopt any presumption that an applicant has met the importance test for antidegradation purposes simply because that applicant's activity has been approved by another agent of the State or found to be economically or socially important by another agency or organization. The importance test reflects a balancing act specific to antidegradation—Do the potential economic benefits of the project outweigh the overall costs to society of allowing additional pollution to the water? This question cannot be answered outside the context of antidegradation and water quality. Although IDEM may use data and analyses from reliable sources to inform its decision on the antidegradation demonstration, IDEM is the agent of the State in the best position to further antidegradation policy by determining when a particular activity is important despite a significant lowering of water quality.

### *Alternative 5. Water Quality Improvement Project for OSRWs*

According to Ind. Code §13-18-3-2 and §13-11-2-50.5, for non-BCCs in OSRWs and EUWs, as well as waters upstream of an OSRW or EUW, any new or increased discharge of a pollutant of concern that results in a significant lowering of water quality for that pollutant shall be prohibited unless the activity causing the increased discharge results in an "overall improvement in water quality in the OSRW or EUW," or the person proposing the increased discharge implements or funds a water quality improvement project in the watershed of the OSRW or EUW that results in an "overall improvement in water quality in the OSRW or EUW."

The phrase "overall improvement in water quality in the OSRW or EUW" is key to the above statutory requirement. The Indiana legislature did not define the phrase, however. IDEM should either define this phrase in the draft rule or should provide guidance for the interpretation and

[31] Washington State Supplementary Guidance Implementing the Tier II Antidegradation Rules (July 18, 2005) WAC 173-201A-320, page 13, *available at* http://www.ecy.wa.gov/programs/wq/swqs/antideg-tier2-guidance.pdf.

implementation of the phrase. Factors that should be considered in evaluating each project that seeks to improve water quality in an OSRW or EUW include the hydrological and ecological context of the waterbody in the watershed; the amount, chemical behavior, and toxicity of the new or increased pollutant; and the likelihood that the project in the watershed will improve water quality in the target OSRW or EUW receiving the new or increased loading.

IDEM must ensure that each improvement project, either implemented or funded by the discharger, actually leads to improvement of water quality in the target OSRW or EUW that receives the new or increased loading. Note that the improvement project must be implemented in the same stream or lake receiving the new or increased loading in order to create "overall improvement in water quality in the OSRW or EUW." No new or increased loading should be allowed if it cannot be clearly shown that a proposed water quality improvement project will result in an overall improvement in the water quality of the OSRW or EUW.

Furthermore, Ind. Code §13-18-3-2(m) requires IDEM to provide in the antidegradation rule:

- criteria for the submission and timely approval of water quality improvement projects;
- a process for public input into the approval process; and
- criteria for using collected fees to fund projects in the watershed that will result in improvement in water quality in the target OSRW or EUW.[32]

A major challenge for IDEM will be to use the fees collected to implement water quality improvement projects that have the mitigating effect required in the target OSRW or EUW. Criteria for selecting projects and monitoring their results in the waterbody receiving the discharge will be key provisions of the rule. IDEM should be careful to fund in-kind projects that will actually offset the particular biological impacts of the added pollutant. While a significant increase in pollutant "A" need not be offset specifically by a decrease in the same pollutant (allowing for pollutant trading schemes), the statutory requirement of an "overall improvement in water quality" must not allow a type of organism to be negatively impacted. For example, increases in a pollutant that affects the reproduction of mussels should be offset by an improvement project that mitigates at least the impact on mussels generally, and not by a project that creates, say, salmon habitat. There can be no "overall improvement" in water quality if the health of one species is sacrificed for the sake of another. The rule also should contain a time frame or time limit for funding mitigation projects from the fund. A project implemented 20 years after the allowed increase in discharge is not likely to effectively mitigate the associated lowering of water quality in the target water receiving the new or increased loading.

### *Alternative 6. Antidegradation Evaluation Trigger*

The application of the antidegradation rule should be triggered by any action that would result in the lowering of water quality in a high-quality water.[33] This trigger simply opens the

[32] Ind. Code §§13-18-3-2(m)(3), -2(m)(4), and -2(m)(6).

[33] See U.S. EPA Water Quality Standards Handbook, Second Edition (August 1994), page 4-7. See also U.S. EPA Region VIII Guidance: Antidegradation Implementation (August 1993), page iii ("Antidegradation requirements are typically triggered when an activity is proposed that may have some effect on existing water quality."). This trigger,

door to the application of antidegradation policy and implementation procedures. The applicant may then qualify for an exemption, or instead may be subject to a full antidegradation demonstration.

Industry representatives have proposed that the trigger to enter the antidegradation rule be either a finding that a new or increased loading has a "reasonable potential to exceed" a water quality standard, or a finding that a new or increased loading requires a "new or increased permit limit." Neither of these proposals is appropriate, for the following reasons.

The limitation of the antidegradation rule to the situation where new or increased pollution has a reasonable potential to cause a violation of water quality standards essentially eliminates all Tier 2 protections and is legally unacceptable. For example, dischargers to the Mississippi River using diffusers do not have a "reasonable potential to exceed" water quality criteria even when quadrupling their discharges. If the reasonable potential to exceed the water quality standard were the trigger for applying the rule, then the only new or increased loadings subject to the antidegradation rule would be those that have a reasonable potential to use up 100% of the assimilative capacity of the waterbody, which is precisely the resource that antidegradation policy is intended to protect.

The limitation of the antidegradation rule to the situation where a new or increased permit limit is required also is not an appropriate trigger for the rule (irrespective of the language in the to-be-replaced 327 IAC 5-2-11.3(b)(1)(B)). Permit limits may be water quality based (WQBELs) or technology based (TBELs). The determination of a WQBEL is linked to the "reasonable potential to exceed," and thus, considering the previous paragraph, a new or increased WQBEL is not an appropriate trigger for applying the rule. In addition, several pollutants of concern do not have water quality criteria, and thus WQBELs are not calculated for these pollutants. However, significant new or increased loadings of these pollutants should not evade antidegradation scrutiny.

A new or increased TBEL also may be inappropriate as a trigger, because such a trigger could omit significant loadings from antidegradation scrutiny.

In short, any trigger that allows more than a *de minimis* new or increased loading of a pollutant to bypass the antidegradation rule is inconsistent with antidegradation policy. Thus, a "new or increased permit limit" would be an appropriate trigger *only if* a new or increased permit limit is required by IDEM regulations for every significant new or increased loading of a pollutant of concern, including pollutants such as nitrogen and phosphorus.[34] IDEM has not, to date, shown that a new or increased permit limit is required by IDEM regulations for every significant new or increased loading of a pollutant of concern.

---

applying the rule to non-exempt new or increased loadings, was agreed upon during IDEM's July 15, 2008 stakeholder meeting (see Antidegradation Stakeholder's Subgroup Meeting Summary, July 15, 2008, page 7).

[34] U.S. EPA has been clear that antidegradation procedures must not exclude nutrients.

## III. Development of Antidegradation Rule Language

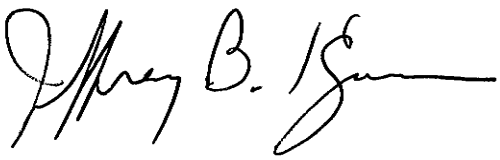
We commend IDEM for its efforts over the past year to meet with stakeholders and to understand their positions and concerns. The stakeholder subgroup meetings established and run by IDEM have brought the key stakeholders to the table, providing the opportunity for frank and open discussions, for agreement where agreement was possible, and for identifying and clarifying areas of irreconcilable disagreement.

Although IDEM provided the opportunity for stakeholder agreement, and had initially hoped that the stakeholder subgroup would forge agreements on key issues, in fact the stakeholder subgroup meetings have not produced much agreement on important issues. When this lack of agreement became obvious to the subgroup and IDEM, the agency reasonably responded by replacing debates over unresolved issues with presentations of stakeholder positions and proposed rule language.

We encourage IDEM to continue this stakeholder subgroup process until all issues of concern to the stakeholders are considered and areas of agreement and dispute are identified.

Thank you for considering our comments.

Sincerely,



Jeffrey B. Hyman, Ph.D., J.D.
Staff Attorney
Conservation Law Center
116 S. Indiana Ave. Suite 4
Bloomington, IN 47408
(812) 856-5737 (Direct Line)
(765) 994-5872 (Cell Phone)
jbhyman@indiana.edu
[also representing Alliance for the Great Lakes]

Albert Ettinger, J.D., Senior Staff Attorney
Bradley Klein, J.D., Staff Attorney
Environmental Law and Policy Center
35 E. Wacker Drive, suite 1300
Chicago, IL 60601
aettinger@elpc.org
bklein@elpc.org

Rae Schnapp, Ph.D., Water Policy Director and Wabash Riverkeeper
Tim Maloney, Senior Policy Director
3951 North Meridian, Suite 100

Hoosier Environmental Council
Indianapolis, IN 46208
rschnapp@hecweb.org
tmaloney@hecweb.org

Bowden Quinn
Conservation Program Coordinator
Sierra Club Hoosier Chapter
1915 W. 18th St., Suite D
Indianapolis, IN 46202
(317) 822-3750
bowden.quinn@sierraclub.org

Ann Alexander, J.D.
Natural Resources Defense Council
101 N. Wacker Drive, Ste. 609
Chicago, IL 60606
Aalexander@nrdc.org

Lyman Welch
Manager, Water Quality Programs
Alliance for the Great Lakes
17 N. State St., Suite 1390
Chicago, IL 60602
P: 312-939-0838 x230
F: 312-939-2708
lwelch@greatlakes.org

Vince Deur
Ingrid Lindfors, Co-Chairs
Surfrider Foundation, Lake Michigan Chapter
6347 Greenway Dr. SE
Grand Rapids, MI 49546
vince@vdpllc.com

Lester B. Priday
Northeast Region Director
Eastern Surfing Association
5903 83rd Place
Kenosha, WI 53142
Phone: 262-605-9096

Fax: 262-605-9371
priday@tds.net

Thomas R. Anderson
Executive Director
Save the Dunes Council, Inc.
444 Barker Road
Michigan City, IN 46360
219-879-3937 phone
www.savedunes.org